

REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-11 are pending in the present application. No claims are amended, canceled or added by the present response.

In the outstanding Office Action, Claims 1-11 were rejected under 35 U.S.C. § 102(e) as anticipated by Saito et al. (U.S. Patent No. 6,891,782, herein "Saito"), and Claims 1-11 were rejected under 35 U.S.C. § 102(e) as anticipated by Yokoi et al. (U.S. Patent No. 6,487,149, herein "Yokoi"), which are respectfully traversed for the following reasons.

Briefly recapitulating, independent Claim 1 is directed to a disk drive that includes, *inter alia*, a push-pull signal generator, an amplitude variation signal generator connected to the push-pull signal and configured to generate and output a fundamental amplitude variation signal, an offset signal generator configured to generate an offset signal, a reference signal generator connected to the amplitude variation signal generator and to the offset signal generator and configured to generate a reference signal by adding the offset signal to the fundamental amplitude variation signal, and a pre-pit detector connected to the push-pull signal generator and to the reference signal generator and configured to compare the push-pull signal with the reference signal and output a comparison result as a pre-pit detection signal. Independent Claims 5 and 9 recite similar features as Claim 1.

In a non-limiting example, Figure 2 shows the push-pull signal generator 9a, the amplitude variation signal generator 44, the offset signal generator from which signal Dth is generated, the reference signal generator 42, and the pre-pit detector 41.

Turning to the applied art, Saito discloses an optical disk recording apparatus having a push-pull signal processing circuit and a pre-pit detection circuit. Saito shows in Figure 1 an

arithmetic operation circuit 24 asserted by the outstanding Office Action to correspond to the claimed push-pull signal generator, a gain variation circuit 28 asserted to correspond to the claimed amplitude variation signal generator, peak detectors 38 and 42 (shown in Figure 6) asserted to correspond to the claimed offset signal generator, a threshold-value setting circuit 32 asserted to correspond to the claimed reference signal generator, and a pre-pit detection output 34 asserted to correspond to the claimed pre-pit detector.

The peak-value detection circuits 38 and 42 shown in Figure 6 of Saito are described at column 6, lines 39-61 as being peak detectors and not offset signal generators as required by independent Claim 1. It is noted that a peak detector detects only a maximum amplitude of a signal received by the device and does not offset a signal as required by the offset signal generator.

Accordingly, Applicants respectfully submit that Saito does not teach or suggest an offset signal generator configured to generate an offset signal as the peak detectors 38 and 42 do not function as offset signal generators.

In addition, Applicants note that the threshold-value setting circuit 32 shown by Saito in Figure 1 is not connected to the peak value detection units 38 and 42 in order to receive a signal from the peak value detection units 38 and 42. Further, the threshold-value setting circuit 32 does not generate a reference signal by adding the offset signal to the fundamental amplitude variation signal. Furthermore, Saito is silent as whether the threshold-value setting circuit 32 adds or subtracts or performs any other mathematical operation on a received signal. Based on Figure 1 of Saito, the threshold-value setting circuit 32 does not receive any signal from the peak value detection units 38 and 42 as required by independent Claim 1.

Accordingly, it is respectfully submitted that independent Claims 1, 5, and 9 and each of the claims depending therefrom patentably distinguish over Saito.

Yokoi discloses an optical recording and reproducing method for an optical disk in which a circuit 63 produces a signal asserted by the outstanding Office Action to correspond to the claimed push-pull signal generator, a peak hold unit 30 asserted by the outstanding Office Action to correspond to the claimed amplitude variation signal generator, a voltage V2 which is asserted by the outstanding Office Action to correspond to the claimed offset signal generator, an amplifier 32 asserted to correspond to the claimed reference signal, and a comparator 34 asserted to correspond to the claimed pre-pit detector.

It is noted that Yokoi does not teach or suggest how the voltage V2 is generated. However, even in the absence of this teaching, one of ordinary skill in the art being aware of Figure 2 of Yokoi, would consider that V2 is generated by a voltage generating circuit, and thus, V2 is a reference voltage and not an offset signal. In this regard, Yokoi discloses at column 8, lines 49-54 that a summing amplifier 32 is supplied with a predetermined voltage V2 and the summing amplifier 32 outputs a higher slice level $V_{PH}+V_2$ to a comparator 34, where the VPH is the peak-hold voltage.

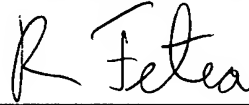
Thus, Yokoi does not teach or suggest an offset signal generator configured to generate an offset signal as the predetermined voltage V2 is not an offset signal but a reference signal.

Accordingly, it is respectfully submitted that independent Claims 1, 5, and 9 and each of the claims depending therefrom patentably distinguish over Yokoi.

Consequently, in light of the above discussion, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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